Melissa Ranglack, Heather Christopherson and Rebecca Force assemble the stimulation board.

Julia Lyman is the mother of a busy 15-year-old—a girl who will seldom stay in one place for more than three minutes if left to herself.

Hayley was born with intellectual disabilities that keep her constantly in search of something to stimulate her senses. Her family watches her closely to make sure she does not hurt herself or damage property. Julia and her husband were good at tag-teaming, and Hayley's older brother and sister helped, but some days it was still hard to get dinner.

"Trying to get anything done in the house was nearly impossible," Julia said. "She has to have so much sensory stimulation coming in that she never gets enough."

So Julia teamed up with the CPD's Assistive Technology Lab to find an affordable, sturdy solution. AT Lab coordinator Stan Clelland, Hayley's family and a team of students brainstormed. They needed something that would feed information into Hayley's senses, offer her a variety of things to do, and—here was the hard part—it had to be virtually indestructible.

Hayley now has a place to play with staying power.

It was all part of the students' learning experience. The assistive technology class in Utah State University's Communicative Disorders and Deaf Education department required them to make assistive technology for people with disabilities. For team member Melissa Ranglack, the experience taught her to use power tools with more confidence and learn more about building and fixing.

First came the design. The students built a three-dimensional mock-up from cardboard and tape. They planned out a three foot by eight foot stimulation board that could bolt to the wall and be locked open or closed for safety. They selected a lot of different objects with varying textures: a mop head, a paint roller; a partial basketball hoop, a foot massager. These were fixed to a plastic peg board in a wood frame.

The testing process was hard, since the team wanted to make sure their design was Hayley-proof. "We would get it semi-perfect and we would play with it. And then we would break it and have to figure out how to fix it," Clelland said.

"In some ways it was kind of fun because we were trying to break it and see if it would be strong enough for Hayley," said Heather Christopherson, one of the three students who built the board.

In other ways it was frustrating when items they thought would work ended up breaking. In the end, though, they were sure they had built a tough piece of equipment.

"The students had great ideas," said Julia. "Safety was a big issue for Stan. He wanted to make sure the design wouldn't do anything to Hayley or the house."

The result is now bolted to the wall in Hayley's bedroom, where it gets a lot of use. The stimulation board is more than tough, it's affordable. Products designed to feed sensory information to their users are available on the Internet, but they can be expensive and many would not stand up to Hayley's exploration.

Julia is glad for a play area that was tailor-made for her daughter. "Now she will stay in here for

up to 45 minutes and be happy."

Reprint courtesy of Center for Persons with Disabilities at Utah State University